

What is claimed is

1. A mobile communication method between a mobile station and a base station comprising the steps of:

designating N unique codes to indicate either a communication from the mobile station to the base station or a communication from the base station to the mobile station, each unique code having an orthogonal property;

transmitting first data of a plurality of users from the mobile station to the base station by incorporating to the first data a first plurality of unique codes indicating a communication from the mobile station to the base station, each first data of a user incorporating one first unique code assigned to the user;

transmitting second data of a plurality of users from the base station to the mobile station by incorporating to the second data a second plurality of unique code indicating a communication from the base station to the mobile station, each second data of a user incorporating one second unique code assigned to the user; and

wherein the base station receives the first data by multiplying each of the first data with a first unique code assigned to a user and wherein the mobile station receives the second data by multiplying each of the second data with a second unique code assigned to a user.

2. A mobile communication method of claim 1, wherein the data incorporated with said first unique codes and said second unique codes are transmitted by spreading, and

wherein the data incorporated with said first unique codes and said second unique codes are received by despreading.

3. A mobile communication method of claim 2, wherein the data incorporated with said first unique codes and said second unique codes are transmitted and received through one channel.

4. A mobile communication method of claim 1, wherein in the step of designating N unique codes, $N/2$ unique codes are designated to indicate a communication from the mobile station to the base station and $N/2$ unique codes are designated to indicate a communication from the base station to the mobile station.

5. A duplexing method, comprising the steps of:

designating N unique codes to indicate either a forward direction communication or a reverse direction communication, each unique code having an orthogonal property;

incorporating the data of a plurality of users with a plurality of unique codes indicating a forward direction communication or a reverse direction communication, each data of a user incorporating one unique code assigned to the user;

transmitting said data; and

receiving the data by multiplying each data of a user with said one unique code

assigned to the user.

6. A duplexing method of claim 5, wherein said data is transmitted by spreading and said data is received by despreading.

7. A duplexing method of claim 6, wherein said data incorporated with said one unique code is transmitted and received through one channel.

8. A duplexing method of claim 5, wherein in the step of designating N unique codes, N/2 unique codes are designated to indicate a forward direction communication and N/2 unique codes are designated to indicate a reverse direction communication.

9. A mobile communication system comprising:
a base station having first data of a plurality of users incorporated with a first plurality of unique codes indicating a first communication direction and having second data of a plurality of users incorporated with a second plurality of unique codes indicating a second communication direction, said base station distinguishing said first and said second data to receive said first data and transmit said second data;

a mobile station having said first data and said second data, said mobile station distinguishing said first and said second data to transmit said first data and receive said

second data; and

wherein said base station receives said first data by multiplying said first data with said first unique code and wherein said mobile station receives said second data by multiplying said second data with said second unique code.

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10. A system of claim 9, wherein each first data of a user incorporates one first unique code assigned to the user and each second data of a user incorporates one second unique code assigned to the user, and wherein the base station receives said first data by multiplying each of the first data with a first unique code assigned to a user and wherein the mobile station receives said second data by multiplying each of the second data with a second unique code assigned to a user.

11. A system of claim 9, wherein the base station comprises

a first recoverer receiving said first data by multiplying said first data with said first unique code; and

a first circulator distinguishing said first and second data, said first circulator forwarding said first data to said first recoverer and transmitting said second data through an antenna; and

wherein the mobile station comprises

a second recoverer receiving said second data by multiplying said

second data with said second unique code; and

a second circulator distinguishing said first and second data, said second circulator forwarding said second data to said second recoverer and transmitting said first data through an antenna.

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12. A system of claim 11, wherein said base station further comprises a first converter incorporating data to be transmitted with a second unique code and forwarding the second data to said first circulator, and wherein said mobile station further comprises a second converter incorporating data to be transmitted with a first unique code and forwarding the first data to said second circulator.

13. A system of claim 9, wherein the base station transmits said second data by spreading and receives said first data by despreading, and wherein the mobile station transmits said first data by spreading and receives said second data by despreading.

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15. A system of claim 9, wherein said first data and second data are transmitted and received through one channel.

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